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ABSTRACT

School health education curricula can be an important vehicle for including units on occupational and vocational health. The traditional cognitive learning of health concepts in the classroom should be expanded to include the functional learning of health on the job through positive health behavior. Together with the media and social and political agencies, the schools should serve as core agencies for health promotion behavior and information. Although the emphasis on occupational health has increased in recent years, presently existing school health programs are generally lacking in their coverage of occupational health and worksite-related health problems. Health education programs in the schools can promote occupational health by focusing on awareness, knowledge, attitude, and change-oriented behavior related to real-life worksite health problems likely to be faced by students in the future. It is both necessary and possible for occupational health programs to bridge the domains of school and community health. (This paper includes facts and statistics on occupational health and work-related health problems and an outline of a proposed unit on occupational health for juniors and seniors in high school). (MN)

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OCCUPATIONAL HEALTH EDUCATION - A VITAL TOPIC FOR ADDING TO THE SCHOOL HEALTH CURRICULA

by

Dr. Moses Stambler

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ABSTRACT

OCCUPATIONAL HEALTH EDUCATION, A VITAL TOPIC
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School health education curricula can be an important vehicle for including units on occupational and vocational health. The traditional cognitive learning of health concepts in the classroom should be expanded to include the functional learning of health on the job thru positive health behavior. The current health promotion focus should be incorporated in the schools to prepare for functioning in the workplace, a real-life institutional setting.

There is an increased emphasis in our society on occupational health as noted by the numerous occupational health sessions at the APHA meeting. Although there is heavy focus on occupational health promotion at the worksite unfortunately there is inadequate emphasis on the need for occupational health learning at school in preparation for the worksite. The school should serve as a major learning area for health concerns related to real-life situations. Thru focusing on awareness, knowledge, attitudes and change oriented behavior related to real-life worksite health problems likely to be faced by the student, health education can function as health promotion.

OCCUPATIONAL HEALTH EDUCATION, A VITAL TOPIC FOR ADDING TO THE SCHOOL HEALTH CURRICULA by Moses Stambler

In the school setting, we are undergoing a shift in emphasis from passive health education to more active health promotion. Traditional clinical models focusing narrowly an individual health are giving way to more contemporary approaches focusing on basic community needs and interrelated systems perspectives.

Traditional Approaches ——————> More Contemporary Approaches

MODEL 1	MODEL - 2	MODEL - 3	MODEL - 4
TARGET ORIENTED PROGRAMS	INTEGRATED SERVICE PROGRAMS	BASIC NEEDS APPROACH	SYSTEMS APPROACH
- Targets specific diseases; - Narrow intervention doesn't deal with multiple factors	-Deals with two or more diseases but objectives are multifold and diffuse; -Still limited to a narrow range of policy instruments	-Deals with general and fundamental problems i.e., Food supplies, prices, improved income distribution -Doesn't integrate multisectoral activities ideologically or functionally	-Focus on problem resolution within the broader interrelated system -Directed toward health promotion as permeating ideology

As part of the conceptual change to a more socio-cultural and participatory approach, there has been a shift from the prescriptive focus of health education to the facilitating focus of understanding health promotion. "Health educators should see to it that they put an abrupt end to that type of health education which was concerned with telling people how to act. They should instead put all the emphasis on understanding all those social forces, anywhere in the world, that cause people to act as they do." (Mahler, 1978, Health for All)

Essential categories of this change in approach are the following:

SHIFT FROM HEALTH EDUCATION TO "HEALTH PROMOTION" *

	EARLIER HEALTH EDUCATION	CURRENT HEALTH PROMOTION
1. BASIS	- Bio-medical - Allopathic medicine - Disease prevention	- Importance of social, cultural and psycho-social factors - Holistic
2. ENVIRONMENT	- Infectious diseases - Specific 'Targeted' action	- Changing disease patterns, chronic - New relationships between community members & wide range of providers
3. WAY TO BETTER HEALTH	- Follow suggestions of knowledge specialists; - Intervention by external authority	- People are able to think and act constructively to identify and solve their own problems - Self-Care
4. TRANSMISSION	- Downward transmission of knowledge and correct information - Clinical, pedagogical	- Participation and community involvement - Up from the people
5. ROLE OF HEALTH OFFICIAL	- Single Role: Provider of service - Needed expertise	- Dual role: facilitator and learner - Dialogue with community to find culturally appropriate health responses
6. ROLE OF TECHNOLOGY	- Industrial model - Increasingly labor & capital intensive	- Linkage with people & community to facilitate health
7. USE OF KNOWLEDGE	- Generate additional knowledge and new tools	- Make good use of existing knowledge
8. ROLE OF EDUCATION	- To teach people the "right" way - Formal instruction	- Educational activities as the best way to encourage people to participate in health care - Non-formal learning

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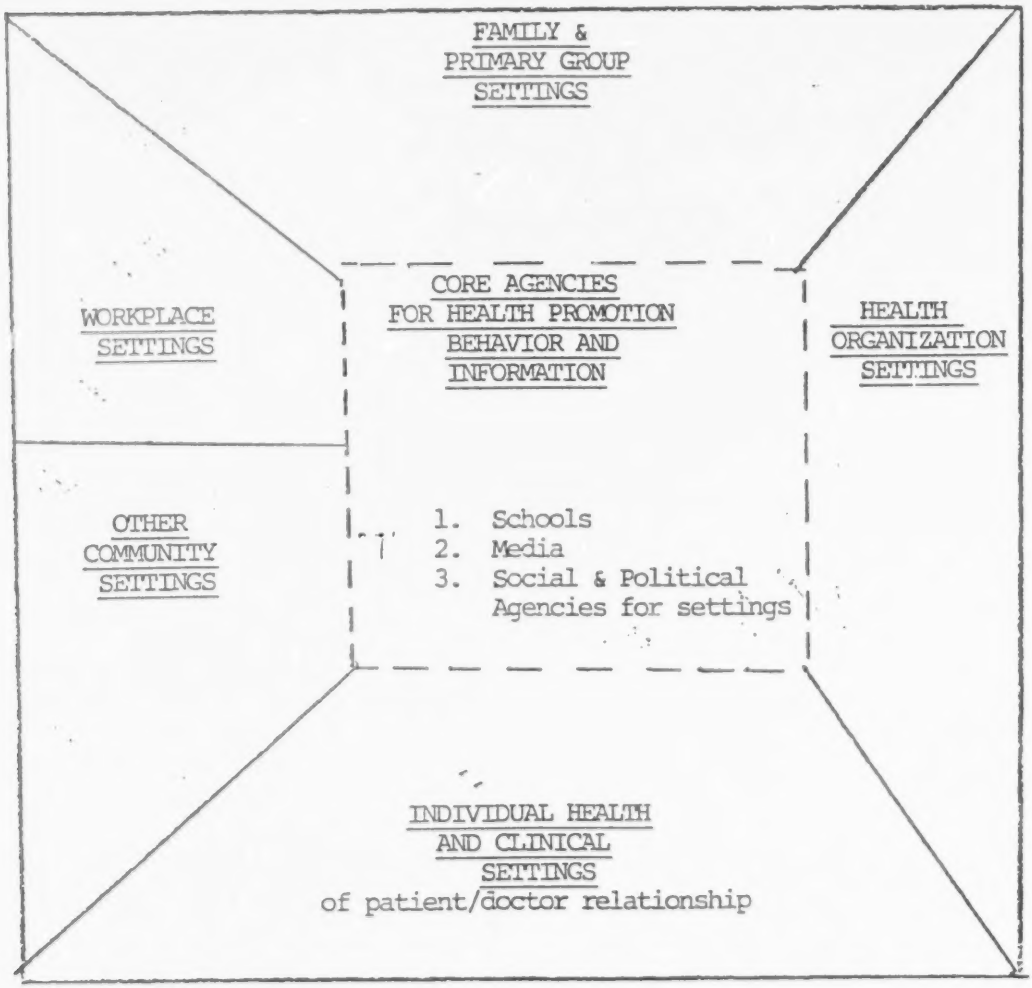
9.	OBJECTIVES OF HEALTH EDUCATION	- Teach people what to do	To increase, "... individual and community capabilities for involvement and self-reliance in health, and to promote healthy behaviour, particularly regarding family health and nutrition, environmental health, healthy lifestyles and disease prevention and control," (Health for All, Series #8, WHO, 1982)
10.	ROLE OF INDIVIDUAL	- Blames the sick, poor and miserable for their illness, poverty & misery	- Recognizes political, economic & environmental factors can have a neutralizing or negative effect on health behavior
11.	POLICY FACTORS	- National targeted - Programs of disease control & family planning, carried out according to professional values & expectations	- Policies to allow & facilitate communities to define & pursue personnel goals; mobilize own resources, and control & evaluate own efforts. - Disease control must fit in with community framework

There are several major institutions involved in health promotional activities during the life cycle. At the core are those providing information and affecting health promotion behavior. These are formal and non-formal educational institutions (schools, colleges, universities, adult education and life-long learning operations); media institutions (video, press, radio); and different lead social and political agencies at various life-span stages (play groups, political organizations, social groups, age-cohort groups). There are five essential institutional frameworks interacting with the core in which health promotion information and behaviors are acted out and modified. These are: the family and primary community; health organizations (including voluntary health agencies, governmental health departments and other official agencies); health care facilities (i.e. hospitals, clinics, ambulatory care centers); employment settings (business and industry); and community settings. Separation into core and interactive institutional settings does not compartmentalize but sets interactive components in a broader system.

The graphic schema which follows illustrates school, media and social/political organizations as central information agencies affecting the five central institutions of family, health organizations, clinical facilities, community settings and employment settings. A number of institutions as must be utilized as health promoters to achieve good health at the worksite setting. Lifelong health promotion suggests there are charging needs and tasks at different chronological stages but we need not wait until one starts working to teach good occupational health approaches.

Information needs and attitude-information for the occupational stage in life can and should place a prime responsibility on central agencies, with facilitation by the school during the formal learning years. A



Significant implication of change from health education to health promotion for the school core agency and its curricula is the need to move from cognitive to social learning.

Social Learning vs. Cognitive Learning - Psychology vs. Logic

There has been a cognitive bias in traditional school health education programs. "... based largely on a theoretical assumption that a change in level of knowledge would change attitudes, which would in turn change behavior, and eventually, habits and customs. Therefore, most formal and informal curricula have their objectives, content and evaluation grounded in information transfer." (Parcel, 1983, 32) Even though improved health behavior is the desired outcome, we have stressed and tested cognitive knowledge rather than improved health behavior as the measure of instructional success. But health promotion requires more than just a cognitive knowledge and test taking of healthful ideas, it requires both behavioral direction to influence the social structure and knowledge of the social structure to affect meaningful change.

A behavioral emphasis shift has been taking place as a result of the affective revolution. From the time of the 1967 School Health Education Study in the U.S.A. (Carr, 1983, 32)

> There has been a growing awareness of the need to go beyond merely the cognitive domain of health education and to include greater emphasis upon the attitudinal or 'affective' domain as well as the development of practices and skills which are a part of the 'action' domain. Today, many health courses are being offered where personal responsibility for decisions about one's health is the focal point of the course. Projects and activities are being included which require extensive student participation in learning situations which relate directly to the student's personal health. Many of these activities involve utilization of community organizations and agencies, their personnel and/or program services in meeting individual health education needs.

Unfortunately shifting to the psychology rather than the logic of learning does not necessarily increase the learners effectiveness in achieving results.

We should combine the behavioral emphasis with a firmer student knowledge of the social structure and behavior influencing the social structure. This can be done by integrating the affective areas of school health with the structural areas of community health as family and primary groups, health organizations, workplaces, community, and patient/doctor settings.

Understanding community and social context helps students appreciate the broader ramifications of health. (Taylor, 1983 , 5)

> ... good health means more than just good medicine. The causes of ill-health-and the things which block the road to good health-are rooted in every part of society: in agriculture, in water supply, in education. And ultimately in politics. Primary health care is about practising something for all, not all treatments for the few; it means a radical shift away from doctor-centered medicine to a health policy that sees equality in general as the foundation of individual good health.
>
> Paying lip-service to primary health care is not enough. The political and economic changes need to bring health to all ... cannnot easily be side-stepped.

Facility in functioning within the social and institutional contexts provides a basis for shared interaction with others, and helps define interactive values about common shared problems. As a result of this new problem formulation appropriate behavioral change can take place. Social

definition of values was the basis for John Dewey's philosophy of education in School & Community which recognized the importance of awareness and action in the community as a means for shaping pragmatic objectives and strategies developed in a theoretical school context.

Learning as a social activity suggests that cognitive knowledge about health requires social reinforcement and support for behavioral change. Assuming personal responsibility for social behavior related to health, can be an important means for achieving health promotion objectives. Traditional school health education (The Medical-Clinical Model) focused on the content of health knowledge, was rote learning that helped pass examinations but did not bring about major behavioral changes. Behavioral-psychological models focused an individual and personal change rather than on the social dimensions. However, social learning theory suggests the value of participation and involving the learner in initiating and activating to achieve a commonly agreed upon objective.

Implications for changes in school health curricula are the need to reinforce an internal locus of control for values clarification on societal issues. Focus therefore shifts from learning of content of health related information, to the process and success of decision-making and applications. School students should be encouraged to do occupational health type activities for themselves and their communities rather than having things done for them. "The use of social learning theory as a framework would change the emphasis to a type of teaching that would lead to an experience of success for children in making decisions about health-related behavior." (Parcel, 1983, 36)

INTEGRATION OF SCHOOL HEALTH AND COMMUNITY HEALTH PROGRAMS THROUGH OCCUPATIONAL HEALTH

There is a need and the possibility for bridging the domains of school health and community health learning through occupational health promotion in the school setting. Traditionally, health education has been conducted on the basis of a dichotomy of school health education and community health education. Individuals contributing to health education efforts in each of these areas were characteristically distinct, the one having received training in a school of public health and the other in a teacher preparation program.

Emphasis on occupational health issues in a school framework bridges the gap between school health curricula and community health needs. It is both a strategy for contemporary envigoration of health curricula in schools and focus on a problem area of intrinsic contemporary value, worthy of energies and efforts in a school setting.

Occupational health provides a vital problem focus for integrating student and community resources. "Instead of asking how we can make health education effective, we need to start with a clearly defined health problem and identify all of the factors which can contribute to its solution. Within this framework, we can then assign a particular role to health education, but we cannot expect it to be fully effective except in conjunction with a variety of other measures." (Reid, 1984, 6). A concept of community health, linked and based in the school system, can

be transferable to a post-school setting. The development of understanding, skills, values, and heightened sensitivity to occupational health, can provide an extension of school subject matter to the post-industrial society.

To integrate community health in school health promotion we should cut across traditional health and teacher training programs. This traditional approach has been to lodge the health promotion subject in the health education/physical education curricula taught by teachers trained in the medical model with little community health background. However, we should relate general concept of health to social problem areas and to the social studies conceptual frames of teachers. Applied to the national experience, we should look to the profile of occupational hazards and health in American society. Taught as social health rather than isolated clinical health, the following social information becomes significant. (Center for Health Promotion and Education, 1983, 1)

1980 SAFETY

1. 13,000 workers died as a result of work-related injuries. Two and one-half million work-related disabling injuries were reported.
2. Time lost due to work-related injuries amounted to 42 million person days, equivalent to the shutdown of plants with nearly 200,000 workers for an entire year.
3. The direct costs to both employers and employees as a result of work-related injuries amounted to $30.2 billion, or approximately $310 for every American worker.

1980 - OCCUPATIONAL DISEASE ESTIMATES (Diseases are more difficult to pinpoint than accidents and injuries)

1. Approximately 100,000 deaths each year are thought to be caused by occupational diseases--more than twice the number killed annually on the nation's highways.
2. Sixty-five percent of all industrial workers are exposed to toxic substances or harmful physical conditions, such as excessive noise or vibrations.
3. Workplace exposure to carcinogens accounts for between 5 and 15 percent of the 400,000 annual cancer deaths in this country. Some experts think that the percentage is even higher.
4. Scientists estimate that between 1982 and the end of the century, 175,000 workers who were exposed to asbestos before 1980 will develop fatal cancers as a result of that exposure.

These data on occupational health and safety could be checked out by students for applications and cases on the city and community levels. This procedure is generally followed by HSA's (Health Systems Agency Agencies) to develop local profiles compared to national statistics.

In addition to comparing local data with national data we can attune students to health hazards to the body-system of work related diseases.

Some Selected Examples of Leading Work-Related Diseases and Injuries - useful for school learning might be the following (Center for Disease Control, 1985, 1)

1. Occupational lung diseases: asbestosis, byssinosis, silicosis, coal workers' penumoconiosis, lung cancer, occupational asthma	1.2 million workers per year are potentially exposed to select dust alone. Latency period for lung diseases may be 15-30 years.
2. Musculoskeletal injuries: disorders of the back, trunk, upper extremity, neck, lower extremity; traumatically induced Raynaud's pheonomenon	In 1982 muskuloskeletal injuries accounted for 580,000 (18% of estimated 3.2 million E.R. treated occupational injuries in the U.S.
3. Occupational cancers (other than lung): leukemia; mesothelioma; cancers of the bladder, nose, and liver	4-20% of U.S. cancers (other than lung are estimated to be related to occupation
4. Severe occupational traumatic injuries: amputations, fractures, eye loss, lacerations, and traumatic deaths	NIOSH estimates at least 10,000,000 persons suffer traumatic job injuries each year
5. Cardiovascular diseases: hypertension, coronary artery disease, acute myocardial infarction.	1980 Cardiovascular deaths were 460,000. Role of occupational causes is not clear
6. Disorders of reproduction: infertility, spontaneous abortion, teratogenesis	At least 50 chemicals in widespread use in industry, cause impairment in animals.
7. Neurotoxic disorders: peripheral neuropathy, toxic encephalitis, psychoses, extreme personality changes (exposure-related)	_____
8. Noise-induced loss of hearing	_____

9. Dermatologic conditions: dermatoses, burns (scaldings), chemical burns, confusions (abrasions) _____

10. Psychologic disorders: neuroses, personality disorders, alcoholism, drug dependency _____

An important reason for teaching occupational health units to teenagers in school settings is its transferable value for later life. Students as future citizens need to be educated while they are still young to avoid job-related safety and health risks, to pay attention to early warning signals of impaired health, and to avoid a sense of fatalism or callousness in their job attitudes. Secondary school health curricula is a good place to promote occupational safety and health, because adolescents, are available to learn and to make changes. Teenagers can be helped to explore the disease and injury record of various occupations before selecting a career to pursue or a job to take, and can develop awareness and sensitivity to occupational health questions which will be useful for making them change agents on the job.

Teaching occupational health should create awareness among students of the:

1. Nature and magnitude of job-related hazards and the possible effects of workplace injuries and illness on an employed person and his or her family;
2. Scope of occupational injuries, illness and emotional stress;

3. Widespread and seriousness of the problems;
4. Causes for problems include not only worker carelessness, faulty equipment, and toxic substances, but also emotional upset, fatigue, insufficient training, and management's failure to eliminate or reduce the potential for accidents and diseases;
5. Effect occupational safety may help nonworking members of the family as well as employed members, both economically and psychologically;
6. Role of government, industry, organized labor and the broader social issues involved;
7. Importance of employee initiative to protect their safety and health.

Aims also should include development of skills adolescents will need later in life as employed people for modifying their work environments. Study of occupational health as part of a health education curricula should result in attitudinal development in which students:

1. View work as a source of potential safety and health hazards, and accept responsibility to take appropriate precautions in the jobs in which they will eventually be employed;
2. Realize that their own vigilance is needed for occupational health, and the value of securing maximum cooperation from management, goverment, unions, or co-workers;

3. Feel that they can develop or secure resources and skills needed to learn the risks of their particular job;
4. Be aware that as employed persons they will have the right and personal responsibility to take an active part in minimizing or eliminating whatever dangers may exist at their workplace;
5. Understand that many employed people do not know all the dangers their work involves;
6. Recognize that many employed people although aware of some of the hazards of their work will not do all they can to protect themselves because of job security concerns;
7. Realize that work-related illnesses, including mental pressures, have spin-off effects for other members of the family;
8. Accept that people should prepare for job hazards that might have adverse effects on their safety or health.

We should start to include occupational health promotion approaches in the Health Education curricula. The following are five suggested units for possible inclusion of occupational health in the health education curricula.

PROPOSED UNIT LESSONS ON OCCUPATIONAL HEALTH

Level: High School, Juniors or Seniors

PIVOTAL QUESTION #1	OBJECTIVES FOR STUDENTS	CONTENT	METHODS
1. How dangerous is living in the modern world? RATIONALE 1. Occupational health problems should be identified on a macrocosmic and micro cosmic levels. 2. Link occupational and social problems.	a. Cognitive 1. Be able to list and identify three occupational hazards in the contemporary world 2. Learn reasons why occupational health is an important area to study 3. List and identify occupational health problems in the community b. Affective 1. Identify with the problems and concerns of workers and their families 2. Develop potential for advocacy c. Skills - Students will be able to list 15 work related health and safety hazards in the contemporary related to different occupations	1. Articles on Bhopal, Love Canal, West Virginia, Atomic plants 2. Newspaper clippings on recent health and safety problems connected with the workplace 3. List of occupational hazards and health problems on a global U.S., and local community scale 4. Linkage between occupational health and social problem	1. Research of U.S. health diseases 2. Questionnaire on community occupational health problems and concerns (See Appendix A) to be completed by students on basis of interviews. 3. Review of Health Systems Agency (HSA) regional health plan, current diseases and corrective targets
PIVOTAL QUESTION #2 1. What types of occupational and health hazards do we have in the school community? At home? 2. Are there any occupational health hazards associated with being a student? teacher? housewife? RATIONALE - Relate occupational health hazards to local concerns.	a. Cognitive 1. Develop a list of occupational health hazards in the community and at home b. Affective 1. To recognize and become sensitized to occupational health hazards in their own environment and to actively seek change based on evaluation of situation c. Skills 1. Enumeration and analysis of health problems from interviews and data	1. Data from questionnaires developed for use at school and at home 2. Personal experience	1. Develop questionnaires 2. Interviews 3. Categorize and evaluate data

PIVOTAL QUESTION #3	OBJECTIVES FOR STUDENTS	CONTENT	METHODS
Do we have adequate control over occupational and safety hazards RATIONALE FOR PIVOTAL QUESTION #3 1. Students should have a view of health concerns and problems as struggles to improve the quality of the workplace. 2. They should recognize the important role of government and labor unions in developing effective health related legislation for the advancing industrial revolution, and be aware of the numerous players in health decisions. 3. Students should develop data based values on the degree of personal and public responsibility for illnesses associated with societal economic benefits and advances	a. Cognitive 1. List three items of national work or health related legislation you consider most important for advancing the cause of occupational health and safety b. Affective 1. Students will understand key problems faced by workers - their families and legislators to improve the work environment. 2. Be able to deal with issues of laissez-faire vs. market approaches. c. Skills 1. Students will draft three pieces of legislation they feel would improve occupational health and safety today	1. Readings on history and occupational health in the U.S. 2. Handouts on laws related to occupational health and safety 3. Historical approaches to governmental regulation for the benefit of populations 4. Readings on current problems with death on the job and hazards at nuclear worksites 5. Newspaper and magazine articles	1. Reading 2. Discussing 3. Communication with older members of their families on legislation that affected their work
PIVOTAL QUESTION # 4 1. What are the ways we can learn about and reduce occupational hazards? RATIONALE FOR PIVOTAL QUESTION #4 1. Students will develop transferable skills for continuing their analysis on occupational health and safety after they have completed this unit. 2. Research skills for lifelong learning and advocacy	a. Cognitive 1. To provide students with the research skills to investigate the hazards of any profession or industry. 2. Name at least three sources of information on occupational health and safety. b. Affective 1. Gain confidence that they can influence workplace health and safety conditions. c. Skills 1. Sharing research findings 2. Develop research & study skills 3. Develop interviewing skills	1. Students conduct their research and fill out a chart which summarizes their findings. 2. Curriculum materials 2.1 OSHA, NIOSH, NIC, 2.2 Materials of Independent researchers Nonprofit worker groups Libraries 3. Students report on what they have learned about hazards of selected occupations and draw conclusions about where to find reliable information about any profession or	1. Use questionnaire 2. Research material on occupational health. Use selected readings and sources.

PIVOTAL QUESTIONS #5	OBJECTIVES FOR STUDENTS	CONTENT	METHODS
1. Which jobs in our society can be hazardous to health? To which body systems? 2. What should we do about it? RATIONALE FOR PIVOTAL QUESTION #5 1. Students should become aware of themselves as active agents with locus of control 2. Students should deal with major value issue of trade offs between economic 3. Advantage and health disadvantage of different occupations 4. Students should view locus of control inside themselves and develop on advocacy approach	a. Cognitive 1. To encourage students to consider occupational health and safety concerns in their selection of a career or job. 2. To encourage students to alert their families to potential health hazards associated with their occupations and to suggest steps they can take to reduce these hazards b. Affective 1. To help students recognize that, with information and practice in communication skills, they can act on behalf of themselves, their families and friends, and the general public to promote worker health and safety. 2. To prepare students for lifelong advocacy role c. Skills 1. To encourage students, as future workers, to share their concerns about specific health and safety precautions with coworkers and with management. 2. To encourage student to develop and maintain an open, assertive interest in occupational health and safety.	1. NIOSH materials 2. Newspaper and magazine articles 3. Profile of jobs with health hazards in the U.S. 4. List of family members, their jobs and the danger they face	1. Research on NIOSH material and newspaper/magazine articles 2. Discussions 3. Interview family members and friends

CONCLUSION

The move to health promotion and increased school community ties suggest the value of introducing occupational health education units in the classroom. These could probably be best taught by teacher attuned to community rather than clinical medicine approaches. The transfer and application value of school in the later working life could be of significance for improving the workplace environment. Delaying learning about Occupational Health issues until one starts work at the worksite fails to take advantage of school learning and the value of transferability.

APPENDIX (Selected Interview Questions from Center for Health Promotion and Education, p. 31-33)

FAMILY INTERVIEW QUESTIONNAIRE FOR WAGE EARNERS

GENERAL QUESTIONS PERSON _____ RELATIONSHIP _____

1. Are you aware of any safety hazards for you and for your co-workers posed by your job? If so, what are they? _____

_____

2. Have you ever tried to have any of these dangers eliminated or reduced? If so, what have you done and what were the results? If not, why not? _____

_____

3. To your knowledge, are there any diseases associated with the kind of work (chemicals, fumes, dust, eye-strain) you do that might show up in future years? Yes ____ No ____ If so, what diseases?

_____

4. Have your co-workers or management taken any measures to eliminate the risk(s)? Yes ____ No ____

If no, why not? _____

5. To your knowledge, has your employer, union, or other employees tried to determine whether substances used on the job are potential hazards?

Yes _____ No ____

If so, what did they find out? _____

_____

6. If the substances used on the job are dangerous, have any protective measures been instituted? Yes ___ No ___

   If yes, what? _____

   If no, why not? _____

7. Is your work environment very noisy? Yes ___ No ___

8. Does your job have any harmful effects on your mental health—that is, does it cause any emotional problems or stress for you? Yes ___ No ___ If yes, what aspects of your job create these feelings?

   _____

   What if anything have you done about it? _____

   _____

9. Did you know about your jobs safety and health hazards before you started this job? Yes ___ No ___

   If so, how did you learn about them? _____

   If not, would you have pursued this career had you known about them in advance? _____

10. How much have you thought about health and safety hazards associated with your job before this interview? A lot ___ Some ___ Not at all ___

11. Are you interested in learning more about the health and safety hazards associated with your job? Yes ___ No ___

    If yes, what would you like to know? _____

12. What steps are you willing to take to learn more about your job hazards?

POST-INTERVIEW ANALYSIS BY STUDENT

1. What, if anything, did you learn by conducting these interviews? Did anything especially surprise or puzzle you?

2. Do you feel the people you interviewed learned anything from this experience? If so, what?

3. Were people more apt to mention safety or health hazards? If safety issues were mentioned more often, why might that be the case?

4. How many people mentioned emotional health hazards?

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